IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

\$ \$ \$ \$ \$ \$ \$ \$ \$

In re Application of:

Theodore F. Emerson et al.

Serial No.:

10/611,403

Filed:

July 1, 2003

For:

OPERATING SYSTEM

INDEPENDENT APPARATUS FOR GRAPHICAL REMOTE ACCESS

Mail Stop Amendment Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450 Group Art Unit:

2628

Examiner:

Nguyen, Hau H.

Atty. Docket:200304331-2

NUHP:0168-1/FLE/PET

CERTIFICATE OF TRANSMISSION OR MAILING 37 C.F.R. 1.8

I hereby certify that this correspondence is being transmitted by facsimile to the United States Patent and Trademark Office in accordance with 37 C.F.R. 1.6(d) or is being deposited with the U.S. Postal Service as First Class Mail with sufficient postage in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the date below:

April 19, 2007

Date

Melissa Neumann

Sir:

DECLARATION OF JEFFERY R. PETERSON

I, Jeffery R. Peterson, hereby declare as follows:

- 1. I am an associate attorney at the law firm of Fletcher Yoder in Houston, Texas.
- 2. My business address is set forth below, along with my signature.
- 3. I worked on the prosecution of the above-identified patent application under the supervision of Mr. Barry D. Blount, who is a shareholder at the law firm of Fletcher Yoder.
- 4. In working on the prosecution of the above-identified application I sought to contact Wesley Ellinger, a named co-inventor. I was informed that Mr. Ellinger no longer

works at Hewlett-Packard Company (HP). On March 29, 2007, I received Mr. Ellinger's last known contact information from HP and promptly attempted to call him at the phone number provided by HP. After several rings, the phone was answered by an answering machine. The answering machine had a female's voice and did not state as to whom the phone number belonged. I left a message asking Mr. Ellinger to contact me. The phone call was never returned.

- 5. Additionally, on March 29, 2007, I performed a reverse telephone number search based on the phone number provided by HP. Specifically, I used http://www.anywho.com/qry/wp_rl. A copy of the results of the reverse search is attached herewith as Exhibit C. The reverse search showed that the number no longer belonged to Mr. Ellinger. See Exhibit C.
- 6. Furthermore, on March 30, 2007, I sent a certified letter to Mr. Ellinger at the address provided by HP. The Attached Exhibit D has a copy of the letter as well as a certified mailing receipt of the mailing of the letter. In the letter, I request Mr. Ellinger to call me at my business number so that we could discuss the patent application. *See* Exhibit D. Because Mr. Ellinger had not contacted me in response to the letter, on April 5, 2007, I checked the status of the certified letter. The results of the status check are attached as Exhibit E. As can be seen, the status of the letter is "Undeliverable as Addressed." *See* Exhibit E. I received the unopened certified letter on April 10, 2007. A copy of the returned, unopened letter is attached as Exhibit F. On the returned letter, the address has been crossed-out and an initialed note states, "Attempted unknown vacant apt 6427." Exhibit F, page 1. Additionally, the return receipt is intact. Exhibit F, page 2.

NUHP:168-1/FLE/PET Declaration Under 37 CFR § 1.131

I declare further that all statements made herein are of my own knowledge, are true and that all statements made on information and belief are believed to be true, and further, that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. §1001, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this verified statement is directed.

Dated: April 19, 2007

By

Declarant's Full Name:

Jeffery R. Peterson

Country of Citizenship:

U.S.A.

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Suite 330

Houston, Texas 77070



EXHIBIT A

Version 1.0

REDACTED

Theodore F. Emerson

Corporate Server Design Industry Standard System Division Compaq Computer Corp., Houston, TX

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Remote Redirection of Graphical Console Data Table Of Contents_____ Introduction _____ 3 Architectural Setting _____ Error! Bookmark not defined. Problem Background/Description _____ Error! Bookmark not defined. 3 Error! Bookmark not defined. 3.1 Overview of I₂O Controllable Devices 3.2 Hidden Devices (1960 Private Address Space Mechanism) Error! Bookmark not defined. 3.3 Devices Hidden By Dragster Error! Bookmark not defined. 3.4 Hidden vs. Non-Hidden Devices Error! Bookmark not defined. Proxy Device ______ Errorl Bookmark not defined. Error! Bookmark not defined. Overview Preventing Proxy from Being Moved by Plug-n-Play Operating Systems Error! Bookmark not defined. 5 Proxy Register Reference Errori Bookmark not defined. 5.1 PCI Configuration Space5.2 Local bus registers Errori Bookmark not defined. Error! Bookmark not defined. 6 Initialization Flow______ Error! Bookmark not defined. Appendix A - Compaq I₂O Connector_____ Error! Bookmark not defined. Table Of Figures ______ Errori Bookmark not delined. Errori Bookmark not defined. Figure 2-1 - Basic Intel Motherboard 1960 Implementation _____ Error! Bookmark not defined. Figure 2-2 - Dragster Look-aside Architecture_ Figure 2-3 - System Board Support for Compaq 120 Connector ____ Figure 3-1 — i960 Hidden Device Mechanism Figure 4-1 — Illustration of Hidden Device Proxy Agent Figure 5-1 - PCI Configuration Space Header_____ Figure 5-2 -- Command Register Layout Errori Bookmark not defined. Figure 5-3 - Status Register Layout Figure 5-4 - Proxy Memory Base Address Register Errori Bookmark not defined. Figure 6-1 - Dragster Initialization Flow _____ Tables ______ Table 5-1 - Proxy Limit Register______Error! Bookmark not defined.

1 Introduction

The purpose of this document is to address the specific problem of remote console recirculion of graphical data. More and more servers are being deployed in environments where the server and the expertise to administer the server are in different physical locations. Additionally, a "lights-out" (no keyboard/monitor) server is highly desirable in many data-centers. In these environments, remote server management and administration is crucial. One key server management technology is the ability to remotely view and control the managed server's console. If this feature is properly implemented, there is little or no need for administrative expertise to be physically present at the server's location.

For such a feature to be useful in various "emergency" situations, it must be as independent as possible from the managed server. Typically, this feature has been implemented in autonomous add-in management cards, such as the Remote Insight Board. This feature has also been embedded directly on the server platform, such as Compaq's Integrated Remote Console. In both of these products, the remote console feature is implemented in such a way as to be entirely independent of software running on the server. This allows the administrator to control the server, regardless of the heath or state of the server. Since the hardware-based remote console function does not require operating system support, the feature can be used to install or configure the operating system as well as when the operating system is off line.

To date, however, such hardware console redirection (or "remote console") has been limited to text video modes only. The primary reasons for this include:

- 1) Complexity The problem of procuring graphical information is very complex mostly due to the nature of the VGA graphics architecture. Since the VGA architecture evolved from several generations of previous graphics controllers, there is a multitude of video modes. These video modes differ greatly in both pixel depth and memory organization. Graphical modes are frequently multiplanar, requiring both I/O and memory operations to access the video frame buffer. Access to graphics video memory frequently can cause side effects and may actually destroy or after the location being read. Consequently, a management processor cannot reliably read the video frame buffer without disturbing it or Intertering with software that is running on the server. The multitude of video modes coupled with the near impossibility of passively reading the video frame buffer have made this feature impossible to implement.
- 2) Bandwidth Typically, remote management devices communicate through an out-of-band mechanism, such as a serial line or modern. The amount of data required to reproduce the server's screen is staggering, especially in true-color video modes. For instance, if the server video is in a 1024x768 true color display mode, the video frame buffer contains 2,359,296 bytes of relavent information. Transmitting this amount of data through a 28.8kbps connection using compression would take over 8 minutes. This is far too slow for "real-time" updates and is mappropriate for controlling a server in graphics mode.

To address the above problems, graphical remote console programs such as Compaq Carbon Copy and PC/Anywhere have typically been designed to interface directly with the video driver of the operating system. When the operating system wishes to draw a circle, the remote console program intercepts the command and instructs a circle to be drawn on it a management console instead or sending the bitmap of the rendered circle. This greatly reduces the bandwidth required to send the graphical data and, since the program intercepts and coordinates with the program rendering the data, there is no need to interrogate the physical frame buffer. These programs work very well as long as the program and operating system are healthy and functioning. Access to graphical video data is not possible before the operating system is loaded or after it has crashed.

The disclosed invention proposes a solution to as of the above problems, providing a method for a management card to produce video information and transmit over a low-bandwidth connection, without coordination or reliance on the operating system. The Invention has been prototyped as a firmware upgrade to integrated Remote Console.

2 Implementation

The Invention disclosed provides a solution to the problems mentioned above. The goal is to provide a graphical remote console which is OS and preferably server independent, which is usable under the conditions when a CS-based graphical remote control application would be unavailable. The goal is not to replace such applications, only to provide a meant of displaying the graphical context when these applications are unavailable. As a result, the look and feel of this "emergency" remote consola close not need to be on par with these applications. The invention has been dubbed "flashlight graphics" which actually is a very good analogy. When the lights are out you would want the lights to come back on but you need a flashlight. The invention definitely achieves "flashlight functionality plus a little more.

The preferred embodiment of this invention uses a combination of several different algorithms to achieve the goals mentioned above. The invention uses a modified sampling technique in conjunction with hardware assistance built into certain PCI video graphics controllers to procure data from the graphics frame buffer. The frame buffer is divided into blacks which consist of a rectangular block of pixels. The pixels within each block are decimated into grayscale, preferably into 2-bits or 4 gray tevels. This decimation greatly reduces the amount of data required to transmit the image, while maintaining readability on the management console. This also essentially collapses all pixel modes into one, meaning that a 24-bpp image takes the same amount of data as a 4-bpp. A hashing algorithm is applied to the decimated pixels within the block to produce a 16-bit hash value. This value can be stored and compared in successive sample periods. If a block hash signature differs from a previously stored value, the block is transmitted to the management console.

The management processor simply enumerates every block in the frame twifer of the managed server applying the above algorithm. When the entire screen is processed, the process is repeated. The result on the management console is a monochrome representation of the managed server's console which is refreshed at a periodic rate. The prototype is capable of one frame every 2 seconds at 640x480 resolution and one frame every 4 seconds at 1024x768. Though somewhat sluggish, this does provide a seemless "flashlight" into the server's console and offers sufficient response time to perform various administrative activities.

A preferred embodiment would use this technique in concert with a software-based solution (Compag Carbon Copy), switching when appropriate. This would automatically provide the administrator with the "best of both worlds," eliminating the need to switch between utilities when the server's state changes.

The techniques used to implement "flashlight graphics" are disclosed in turther detail below.

2.1 Frame Buffer Access

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Access to the graphics frame buffer has been a virtual impossibility in traditional VGA designs. (see complexity above) Newer PCI VGA controllers, however, allow the video frame buffer to be additionally mapped to a high-address in PCI address space. Certain video controllers, like the ones from ATI Technologies (used in all new server dasigns) allow deterministic linear access to the video frame buffer from the high-address aperture. Accesses are tree from side-effects and require only aproxi knowledge of the format of the video data. The frame buffer is available on the ATI controllers even in legacy VGA modes. The prototype has been able to successfully interpret the data from all super-VGA and relevant legacy-VGA modes.

2.2 Sampling Techniques

The two techniques commonly used to obtain video data are discrete-time sampling and continuous sampling. In the discrete-time sampling approach, the management processor takes a snapshot of video memory at a fixed interval of time. This snapshot is compared to a previous snapshot and preferably the differences are encoded and transmitted. This is the method used on the original Server Manager/R board and on several competitors' products. This requires access to the video frame buffer and a fairly large buffer to store at least one copy of the video screen. This works for text modes since the data is infrequently modified and there is a relatively small amount of data to collect (-4k). The integrated Remote Console ASIC implements a continuous sampling technique whereby video data is passively snooped as it is written to the frame buffer and then preferably encoded and transmitted. This technique yields very realistic performance since data is drawn on the management console exactly the same way that it is rendered on the managed server. In graphics modes, however, redundant data is frequently written to the frame buffer. Depending upon the intelligence of the display driver performing the rendering, a continuous sampling approach would potentially encode a lot of redundant information. Since the data encoded would greatly depend on the activity of the managed server's console and the response time would be bottlenecked by the speed of the transmission medium. The discrete-time sampling technique, although it can potentially provide a deterministic refresh rate, requires a huge frame buffer (2-4Meg) encode sampled

The "flashlight" approach uses a modified discrete-time sampling approach. The screen is divided into a plurality of blocks, each containing a rectangular block of pixels. The preferred embodiment uses 16 x 16 pixel blocks, breaking a 1024 x 768 display buffer into 64 x 48 blocks. Each block is sequentially produced, converted to grayscale, and encoded. Once decimated to a block of gray pixels, a 16-bit hash value is calculated and stored representing the block. In this example, the management processor only need maintain 64 x 48 x 2 bytes/block, or 6144 bytes.

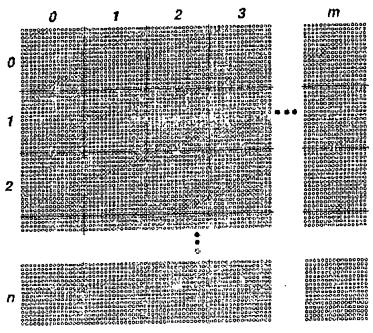


Figure 2-1 - Pixel to Block mapping

Instead of maintaining a complete copy of a previous image sample, the management processor only need keep an array of 16-bit hash entries corresponding to each block.

2.3 Grayscale Conversion

For "emergency" situations, full representation of each color on the managed servers display is unnecessary. Preferably, the encoding algorithm reduces the number of colors to 4 gray strades. This number of snades gives enough color depth to distinguish kons, text, and windows controls on the managed server's screen. This conversion essentially collapses all permutations of color depth into one. That is, once decimated, there is no encoding difference between a 1024x768x4 (16 color mode) and a 1024x768x24 (true color) display mode. This greatly reduces the number of display modes needed to be majoretist by the managed servers display and be not predicted to the managed servers display, nothing else.

The standard equation for calculating luminance from a RGB pixel value is: Y=0.3*R + 0.59*G + 0.11*B

Since this formula involves floating point calculations, it is not easily rendered by the management processor. The grayscale conversion preferably uses the following approximation:

Y=0.25*R + 0.50*G + 0.25*B

This equation can be calculated very easily with simple register shift instructions.

The resulting Image is very readable and more than adequate for "eme gency" or OS install applications.

2.4 Hashing Algorithm

The key to enable the management processor to detect modified screen areas is a reliable hash algorithm. From each pixel block, the gray scale values are ted into a hashing algorithm to generate a "signature" for the pixel block. The algorithm preferably uses 16-bit hash values, to reduce the amount of data that must be stored by the management processor. The 16-bit value maps to 65535 different pixel block signatures. Obviously, with only 65535 different possible block signatures, it is possible for two or more different pixel block configurations to map to the same hash value. If this occurs, the management processor would be unable to detect changes to that pixel block. This problem is unavoidable and the hashing algorithm is chosen in such a way as to resist changes that would commonly effect a block. Such operations include, drawing vertical or trotzontal lines, etc. Since it is impossible to completely militate against hash aliasing, the algorithm will periodically retransmit each block on the screen to insure synchronization. The period for screen synchronization is TBD and may not be measured from soil "emergency" operations that would need to be nationmed. Another solution is to provide a "refresh" key on the management console when the user detects an area with nest taller, out of synchronization.

To mitigate hash aliasing, the hashing algorithm generates two independent hash values which are XQRed when the entire block has been processed. The 2-bit pixel values are packed into a memory block that is fed to the hashing algorithm.

Hash1=(Hash1+WORD(pir)) ROL 1 Hash2=Hash2-WORD(pir)

Once applied to each WORD of the packed pixel block, the two hash values are then XORed to produce a final 16-bit hash signature. The ROL instruction on the first hash function is to miligate against vertical changes to the pixel block.

Obviously, the hashing algorithm may continuously be retined. The algorithm produces very pleasing results and detects most screen changes very effectively.

2.5 Data Encoding

When a block has been identified for transmission, the decimated grayscale value of the block are transmitted to the management console. This data is usually very compressible. To reduce the amount or data sent to the management console, a data reduction algorithm is performed. Preferably, this is a simple nun-length encoding algorithm which is simple to implement on the management processor.

In addition to intra pixel-block run-length encoding, the digital hash signatures can also be used to greatly reduce the number of blocks transmitted to the management console. For instance, if the management console performed a clear screen operation, adjacent pixel blocks would hash to the same value. Upon detecting the same hash value, the management processor might run-length encode pixel blocks—essentially telling the management console to repeat the gravious birel block in times:

Obviously, any data compression technique can be used to reduce the amount of decimated pixel data that needs to be sent to the management console. The communications media may also contain hardware compression algorithms to further increase the data bandwidth available for transmission. (Modem v.34, etc.)

2.6 Detecting Mode Changes

Periodically, the management processor will check the video mode settings of the graphics adapter to insure that the graphics mode has not changed. This is preterably done at the stant of each frame. The management processor examines the horizontal and vertical pixel widths as well as the color depth so the graphics frame buffer can be properly interpreted. For indexed color modes, where a palette is used, the palette is interrogated preterably at the start of each frame to detect changes in the graphics color palette. This insures that the data is correctly interpreted and translated to grayscale.

EXHIBIT B

Segment and extrns

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RETACTED

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```
HashLoop:
         MOV
                  eax, dword ptr cs:[si+offset BlockBuf]
                                                            Grab next Line
          add
                  si,4
          add
                  dx, ax
                  bx, ax
          sub
                                                                                     Section C
          rol
          shr
                  eax,16
         add
                  dx,ax
         sub
                  bx, ax
         rol
                  dx.1
                  HashLoop
         loop
                  dx.bx
         xor
 :DX now contains the hash for this block. Compare it to the hash table
         mov
                  bx, word ptr cs: [nBlockCount]
                                                                                      Section D
         shl
                  bx,1
                                      -Get word address
                  dx, word pt [bx+wVidMem] short BlockDiff
         cmp
                                                   ; Is the hash value the same?
         jnz
 :Ok, the block has not been modified.
BlockUnmodified:
         test
                 byte ptr ds: [GRX_STATUS], fGrxAnchor
         cmb
                 byte ptr cs:[fAnchor],0 ;Are we anchored?
                 short BlockUnmodUnanchored
         İΖ
                                                   ; Are we anchored?
         call
                 FlushRLE
                                                   ;Flush out old stuff
         mov
                 byte ptr cs:[fAnchor], 0 ; Raise the anchor
         and
                 byte ptr ds: [GRX_STATUS], NOT fGrxAnchor; Raise the anchor
BlockUnmodUnanchored:
         ret
                                                                                                Section E
                                    of th
BlockDiff:
        mov
                 word ptr [bx+wVidMem],dx
                                                           ; Update hash table
         cmp
                 byte ptr cs:[fAnchor],1
                                                   ; Are we anchored?
                 short BlockDiffAnchored
         jz
                 byte ptr ds:[GRX_STATUS],fGrxAnchor short BlockDiffAnchored
         test
                                                           ; Are we anchored?
        jnz
:Ok, blocks has been modified and we are not currently anchored. Send out new address
; and set anchor.
        mov
                 byte ptr cs:[fAnchor],1
                                                   ; Drop anchor
        or
                 byte ptr ds: [GRX_STATUS], fGrxAnchor
                                                         ;Drop anchor
        mov
                 al, GRXESCOPCODE
                                          ; Send out Escape code
        call
                 EmitByteRaw
                 al, GRXSETCURSOR
                                          ; Send out Set cursor opcode
        mov
        call
                 EmitByteRaw
        mov
                 al, byte ptr cs: [nCol]
        call
                 EmitByteRaw
        mov
                 al, byte ptr cs: [nRow]
        call
                 EmitByteRaw
BlockDiffAnchored:
```

```
si,0
         mov
                                                           Section E
                  cx, GRXBLOCKHEIGHT*4
          mov
 BlockDiffSendLp:
         mov
                  al,cs:(si+offset BlockBuf)
         add
                  si.1
         call
                  EncodeByte
         loop
                  BlockDiffSendLp
 : Encode 8-bits per pixel video data
     ESI points to video frame buffer
          CL pixel count horizontal
          CH pixel count vertical
         EDX pixel accumulator
          BX index register to point into palette buffer
Encode8:
         push
                 esi
                                          ;Save registers
         push
                 es
         mov
                 ax, VIDSEL
         mov
                 es,ax
                                    ;Load selector of memory base (SMI will be 0)
         mov
                 cx,0
                 bx,0
         mov
         xor
                 edx, edx
                                                                                               Section B
Encode8LineLp:
         mov
                 eax,es:[esi]
                                          ;Grab 8-bit pixel value
         add
                 esi,4
                                          ; Move to next pixel
Encode8SetLp:
        mov
                 bl.al
        shr
                 eax,8
                 bl.cs:[nPalBuf+bx]
        mov
                                          ;Load decimated value
        rol
                 edx, GRXGRAYDEPTH
                                          ;Shift up
        or
                 dl,bl
                                          ; Place in pixel accumulator
        inc
                                    ;Increment pixel number ;Are we done with this set of pixels?
        test
                 cl,00000011b
        jnz
                 short Encode8SetLp
        test
                 cl, (32/GRXGRAYDEPTH)-1 ; Packing 32/GRXGRAYDEPTH bits into DWORD
        jnz
                short Encode8LineLp
        mov
                eax,edx
        call
                SaveGrxDWORD
                                         ; Send this GRX data
                edx,edx
cl,GRXBLOCKWIDTH-1
        xor
                                         :Clear out pixel accumulator
         test
                                         :These test are not needed if blockwidth = 16
        jnz
                short Encode8LineLp
                                           :These test are not needed if blockwidth = 16
:We have encoded a line of GRXBLOCKWIDTH pixels
        add
                esi, dword ptr cs: [dwNextLine]
                                                   ; Move index register to next line in block
        test
                cx, (GRXBLOCKWIDTH*GRXBLOCKHEIGHT)-1
                                                         :Are we done with this block?
        jnz
                short Encode8LineLp
       pop
                es
                esi
        pop
                                         ;Restore registers
        ret
```



```
RED.4CTED
 GetModeInfo:
         push
          mov
                  ax, VIDSEL
         mov
                  es, ax
                                      ;Load selector of memory base (SMI will be 0)
                  byte ptr ds:[GRX_STATUS],NOT fResChange ;Assume no resolution change
         and
         mov
                  eax, dword ptr cs: [nbScreenWidth]
         mov
                  dword ptr cs: [nbOldScreenWidth], eax
                                                             :Store away old mode
         xor
                  eax, eax
         mov
                  dword ptr cs:[dwVTOP],eax
 ifdef IRC
         mov
                  ebx, dword ptr cs:[dwAperatureBaseAdr]
         mov
                  ax, word ptr es:[ebx+7ffc00h+CRTC_H_DISP]
                                                                 :Get horizontal display end (pixels*8)
                                     ;Upper 8-bits of this register are reserved
;Value is 1 less than you would expect
         xor
                  ah, ah
                  ax
         shr
                  ax,1
                                      ; Value is pixels*8, divide by 2 to get number of blocks (16 pixels
widel
else
         mov
                  ax,320/16
endif
         mov
                  cs: [nbScreenWidth], ax
ifdef PARANOID
                  dx,10f0h
         mov
         out
                  dx, ax
endif
ifdef IRC
                 ax, word ptr es:[ebx+7ffc00h+CRTC_V_DISP]
                                                               ;Get horizontal display end (pixels*8)
         and
                 ax,07ffh
                                           :Upper bits reserved
         inc
         shr
                 ax,4
                                     : Value is in lines. Divide by 16 to get number of blocks (16 lines
high)
else
                 ax, 200/16
        mov
endif
        mov
                 cs: [nbScreenHeight], ax
ifdef PARANOID
                 dx,10f0h
        mov
        out
                 dx, ax
endif
```

EncodeNOP:

ret

align	4		
dwEncodeTable	dw	offset EncodeModell	3
	đw	offset Encode4	
	dw	offset Encode8	
	dw	offset EncodeNOP	
	dw	offset Encode16	
	dw	offset Encode24	



EXHIBIT C







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WHITE PAGES

REVERSE LOOKUP

HELP

GOOGIC WEB SEARCH

O GO

FIND A BUSINESS OR PERSON BY PHONE NUMBER

Area Code Required 281

Telephone Number Required 8071884

SEARCH

No Results? Try Again Here

XXXXXX

Reverse

Leekup

TIP: Cell phone numbers are not available

You searched for: 281 8071884 Results 1 - 1 of 1

◆ PREVIOUS | NEXT

Reverse Telephone Listings

Alexander, M T

7979 N Eldridge Pkwy Houston, TX 77041

Maps & Directions | Did you go to school with M T Alexander? Find All M T Alexander's Info Here! Instant Background Check Available - \$49.95! Find a Nearby Business

281-807-1884

Useful Links Find People

Séarch.

Satellite Photo

XXX

◆ PREVIOUS | NEXT ▶

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EXHIBIT D

A Professional Corporation

Attorneys at Law

7915 FM 1960 West, Suite 330 Houston, Texas 77070

Post Office Box 692289 Houston, Texas 77269-2289

> Telephone (281) 970-4545 Facsimile (281) 970-4503

> > 200304331-2 NUHP:0168-1

March 30, 2007

Wesley Ellinger 10910 Gold Pt #1904 Houston, TX 77064 Phone: 281-807-1884

Dear Mr. Ellinger:

I am currently working on a patent application assigned to your former employer, Hewlett-Packard Company, on which you are named as a co-inventor. Please contact me as soon as possible at (281) 970-4545 so that we may discuss the application.

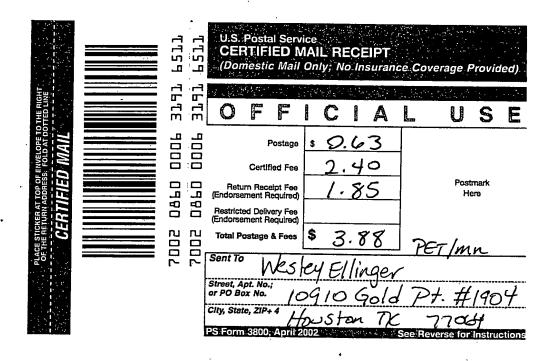
I look forward to hearing from you soon.

Regards,

Jeffery R. Peterson

cc: Michael G. Fletcher, Esq. Barry D. Blount, Esq.

SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION ON DELIVERY
 Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired. Print your name and address on the reverse so that we can return the card to you. 	A. Signature X
 Attach this card to the back of the mailpiece, or on the front if space permits. 	B. Received by (Printed Name) C. Date of Delivery
1. Article Addressed to:	D. Is delivery address different from item 1? Yes If YES, enter delivery address below: No
Wesley Ellinger	
10910 Gold Pt. #1904	
Houston, TX 77064	
	3. Service Type Certified Mail Registered Insured Mail C.O.D.
NUHP: 0168-1	4. Restricted Delivery? (Extra Fee) ☐ Yes
2. Article Number (Transfer from service label) 7002	0860 0006 3191 6511
PS Form 3811, August 2001 Domestic Re	turn Receipt 102505 00 M 1025



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EXHIBIT E



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Track & Confirm

Search Results

Label/Receipt Number: 7002 0860 0006 3191 6511 Status: Undeliverable as Addressed

Your item was undeliverable as addressed at 11:08 AM on March 31, 2007 in HOUSTON, TX 77064. It is being returned if appropriate information is available.

Additional Details > (Return to USPS.com Home >



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Track & Confirm by email

Get current event information or updates for your item sent to you or others by email. (Go>)



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4/5/2007 4:32 PM

EXHIBIT F

Fletcher Yoder P.O. Box 692289 Houston, TX 77269-2289

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77064



10910 gold Pt #1904 Houston, TX 77064 Wesley Elkinger



SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION ON DELIVERY	
■ Complete items 1, 2, and 3. Also complete	A. Signature	
Item 4 if Restricted Delivery is desired.Print your name and address on the reverse	×	☐ Agent
so that we can return the card to you.Attach this card to the back of the mailpiece, or on the front if space permits.	B. Received by (Printed Name) C. Dat	C. Date of Delivery
1. Article Addressed to:	D. Is delivery address different from item 1? Yes If YES, enter delivery address below.	Nes
Wesley Ellinger		<u>}</u>
10910 Gold Pt. #1904		
Houston, TX 77064		
	3. Service Type M Certified Mail	
	☐ Registered ☐ Return Receipt for Merchandise ☐ Insured Mail ☐ C.O.D.	Merchandise
NUHP:0168-1	ery? (Extra Fee)	
2. Article Number		
(Transfer from service label)	7002 0860 0006 3191 6511	
PS Form 3811, August 2001 Domestic Return Receipt		102595-02-M-1035

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